

10/820, 525

Amendments to the Specification

Please amend the title on page 1, lines 1 and 2 with the following amended version of the title:

METHODS FOR PRODUCING LOW-K ~~CDO~~ CARBON DOPED OXIDE FILMS
WITH LOW RESIDUAL STRESS

SD
5/6/10
Please replace paragraph ~~10019~~¹¹⁹ with the following amended version of the paragraph.

The process gases are introduced via inlet 1412. Multiple source gas lines ~~1410~~¹⁴¹⁰ are connected to manifold 1408. The gases may be premixed or not. Appropriate valving and mass flow control mechanisms are employed to ensure that the correct gases are delivered during the deposition and plasma treatment phases of the process. In some embodiments, the sonic front caused by a process gas entering the chamber will itself cause the gas to rapidly disperse in all directions – including toward the substrate.

Please replace the abstract beginning on page 35, line 4 with the following amended version of the abstract:

Methods of preparing a carbon doped oxide (CDO) layer of low dielectric constant and low residual stress ~~are provided. The methods involve~~ involving, for instance, providing a substrate to a deposition chamber and exposing it to an organosilicon precursor containing unsaturated C-C bonds or to multiple organic precursors including in which at least one ~~would be~~ organosilicon and at least one ~~would possess~~ unsaturated C-C bond~~[[,]]~~ are provided, followed by The methods may also involve igniting and maintaining a plasma in a deposition chamber using radio frequency power having high and low frequency components with a high percentage of the low frequency component, and depositing the carbon doped dielectric layer under conditions in which the resulting dielectric layer has a residual stress of not greater than, e.g., about 50MPa, and a dielectric constant not greater than about 3.